CLAIMS

What is claimed is:

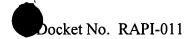
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- A method for detecting concealed items on or in an object, comprising: 1. producing a pencil beam of x-rays from an x-ray source directed toward said object;
- scanning said beam of x-rays over the surface of said object; and 15 detecting x-rays scattered from said beam of x-rays as a result of interacting with said object and a low Z material panel, said object located between said detector and said panel.
 - The method of claim 1 further comprising generating a signal representative of 2. the intensity of the x-rays scattered.
- The method of claim 2 further comprising presenting said signal on a display. 3.
- The method of claim I wherein said low Z material panel is made polyethylene. 4.
 - 5. The method of claim 1 wherein said low Z material panel is made of epoxy. 4
 - The method of claim 1 wherein said low Z material panel is made of water. 6.

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7. The method of claim 1 further comprising a radiation shield coupled to said low Z material panel, said low Z material panel located between said object and said radiation shield.

8. The method of claim 7 wherein said radiation shield comprises an x-ray absorbing material.

9. The method of claim 8 wherein said x-ray absorbing material is steel. ν_{λ}

10. The method of claim 8 wherein said x-ray absorbing material is lead.

11. The method of claim 7 wherein said radiation shield is about 1mm thick.

12. The method of claim 1 wherein said low Z material panel is located above said object.

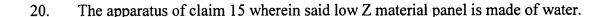
13. The method of claim 1 wherein said low Z material panel is located below said object.

14. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for detecting concealed items on or in an object, said method comprising:

producing a pencil beam of x-rays from an x-ray source directed toward said object;

scanning said beam of x-rays over the surface of said object; and detecting x-rays scattered from said beam of x-rays as a result of interacting with said object and a low Z material panel, said object located between said detector and said panel.

- 15. An apparatus to detect concealed items on or in an object, comprising: an x-ray source to produce a pencil beam of x-rays directed toward said object; a scanner to scan said beam of x-rays over the surface of said object; and a detector to detect x-rays scattered from said beam of x-rays as a result of interacting with said object and a low Z material panel, said object located between said detector and said panel.
- 16. The apparatus of claim 15 further comprising a processor to generate a signal representative of the intensity of the x-rays scattered.
- 17. The apparatus of claim 16 further comprising a display to display said signal.
- 18. The apparatus of claim 15 wherein said low Z material panel is made polyethylene.
- 19. The apparatus of claim 15 wherein said low Z material panel is made of epoxy.



- 21. The apparatus of claim 15 further comprising a radiation shield coupled to said low Z material panel, said low Z material panel located between said object and said radiation shield.
- 22. The apparatus of claim 21 wherein said radiation shield comprises an x-ray absorbing material.
- 23. The apparatus of claim 22 wherein said x-ray absorbing material is steel.
- 24. The apparatus of claim 22 wherein said x-ray absorbing material is lead.
- 25. The apparatus of claim 21 wherein said radiation shield is about 1mm thick.
- 26. The apparatus of claim 15 wherein said low Z material panel is located above said object.
 - 27. The apparatus of claim 15 wherein said low Z material panel is located below said object.